

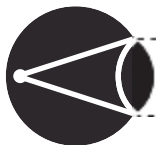
# Cash or Gas?

## Student Activity Sheet



Congratulations! You have just won the state lottery, and now you must choose your prize—either \$250,000 in cash or free gas for life.

1. Complete parts (a) and (b) without making any calculations, and then answer the question in part (c):
  - a. Describe the lifestyle of a person for whom the \$250,000 prize is likely to be the best option.
  - b. Describe the lifestyle of a person for whom free gas for life is likely to be the best option.
  - c. Which prize do you think would be likely to be best for you? Explain why.
2. Calculate which prize would be likely to have the greatest monetary value for you. Support your answer mathematically. Discuss your reasoning and any assumptions that you make.
3. Show in detail how changing one or more of your assumptions in question 2 could change the prize that is best for you to pick. Include specific calculations to support your answer.



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### Student Activity Sheet (Continued)

Read all about it! The following excerpt is from an article by Carmen Gentile that appeared in the *New York Times* on July 8, 2008:

Rising gasoline prices have brought a new twist on the state lottery in Florida.

Once a week for the next two months, the second-prize winner in the latest lottery promotion, Summer Cash, will win free gasoline for life. And some people think that is a better deal than the game's first prize, a quarter of a million dollars.

"If gas keeps going up and up — and I expect it will — then I'd rather have free gas for life," said Robert Acosta, who spends about \$50 a week on fuel for his four-cylinder Toyota Scion and bought a \$5 Summer Cash ticket in anticipation of the first drawing, this Wednesday.

Not that a winner's right to free gasoline is unlimited. Rather, each winner will be awarded 26 prepaid gas cards, each worth \$100, every year until death. Were the 44-year-old Mr. Acosta to win, and live to be twice his current age, the total payout to him in free gasoline would be \$114,400. That is far short of the first prize, particularly since virtually all the gas prize would be paid in future dollars.

But with a gallon of unleaded regular in South Florida costing an average of about \$4.30, some players are ready to forgo the math.

"Gas has become more precious than cash now," Bernard Feldman said.

Gentile, Carmen. "Lottery Adds to Prizes: Now Gas as Well as Cash." *New York Times*, July 8, 2008. <http://www.nytimes.com/2008/07/08/us/08prize.html>.